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Buy-Now-Pay-Later Integration and Cart Abandonment: What Mobile Storefront Logs Can and Cannot Show

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Abstract

Providers of buy-now-pay-later credit present their product to merchants as a remedy for cart abandonment, and mobile storefronts, where abandonment is common and typing card details is tedious, are the main target of that claim. Merchants who add a deferred-payment option naturally look to their own logs for confirmation. This short communication considers what such logs can and cannot establish. It reviews the behavioural reasons to expect an effect, drawn from research on mental accounting and the pain of paying, and the reasons to expect it to be smaller than advertised, since much abandonment has nothing to do with payment. It then sets out which log signals are informative, why before-and-after comparisons and comparisons between shoppers who do and do not choose the option are unreliable, and what a credible test would require. The note reports no data. It also argues that conversion is an incomplete measure of success, because regulators and researchers have raised concerns about overextension among users of this form of credit, and it suggests outcomes that merchants and researchers should track alongside completed orders.

Keywords: *Buy now, pay later, Cart abandonment, Mobile commerce, Checkout conversion, Storefront logs, Consumer credit*

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1. Introduction

Buy-now-pay-later (BNPL) products let a shopper take goods at once and pay in a small number of instalments, typically without interest when payments are made on time. The best-known form divides the price into four payments over about six weeks. The lender pays the merchant at the outset, less a fee, and bears the risk of non-payment. Merchants accept the fee because providers promise higher conversion and larger baskets, and an integration usually places the offer in three spots: a message beside the price on the product page, a reminder in the cart, and a button at checkout.

The claim about conversion is often expressed as a reduction in cart abandonment. It is a claim that a merchant can apparently check, since every storefront records carts created and orders completed. This note argues that the check is harder than it looks. It draws on published research and regulatory reports,

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presents no data of its own, and aims to help merchants and researchers read mobile storefront logs with appropriate caution.

2. Reasons to Expect an Effect

Behavioural research gives good grounds for thinking that the framing and timing of a payment change willingness to buy. [Prelec and Loewenstein \(1998\)](#) described a pain of paying that is felt most sharply when payment is closely coupled to consumption and is dulled when the two are separated. Willingness to pay has been found to be higher when people expect to use a credit card than when they expect to pay cash ([Prelec and Simester, 2001](#)), and payment methods that make outlays less salient and less memorable are associated with greater spending ([Soman, 2001](#)). Reframing a total as a series of small amounts makes it easier to accept, because small amounts invite comparison with trivial everyday expenses ([Gourville, 1998](#)).

A BNPL offer uses all of these levers. The instalment figure shown beside the price is a fraction of the total, most of the payment is postponed, and for returning users the checkout can be completed without typing a card number, which matters on a small screen. Analysis of transaction data has associated the adoption of BNPL with increased spending by its users ([Di Maggio et al., 2022](#)). An effect on the completion of mobile checkouts is therefore plausible. Its size is another matter.

3. Reasons to Expect a Smaller Effect

Abandoned carts are not all lost sales, and lost sales are not all lost to payment. Figure 1 groups the common reasons. Shoppers use the cart as a wish list, as a calculator for the total with shipping, and as a place to wait for a discount ([Kukar-Kinney and Close, 2010](#)). Others leave because of perceived risk, waiting time or the inconvenience of the transaction ([Rajamma et al., 2009](#)). Deferred payment can address a concern about cost today and some of the inconvenience. It does nothing for the shopper who was only browsing, and little for one deterred by a delivery charge.

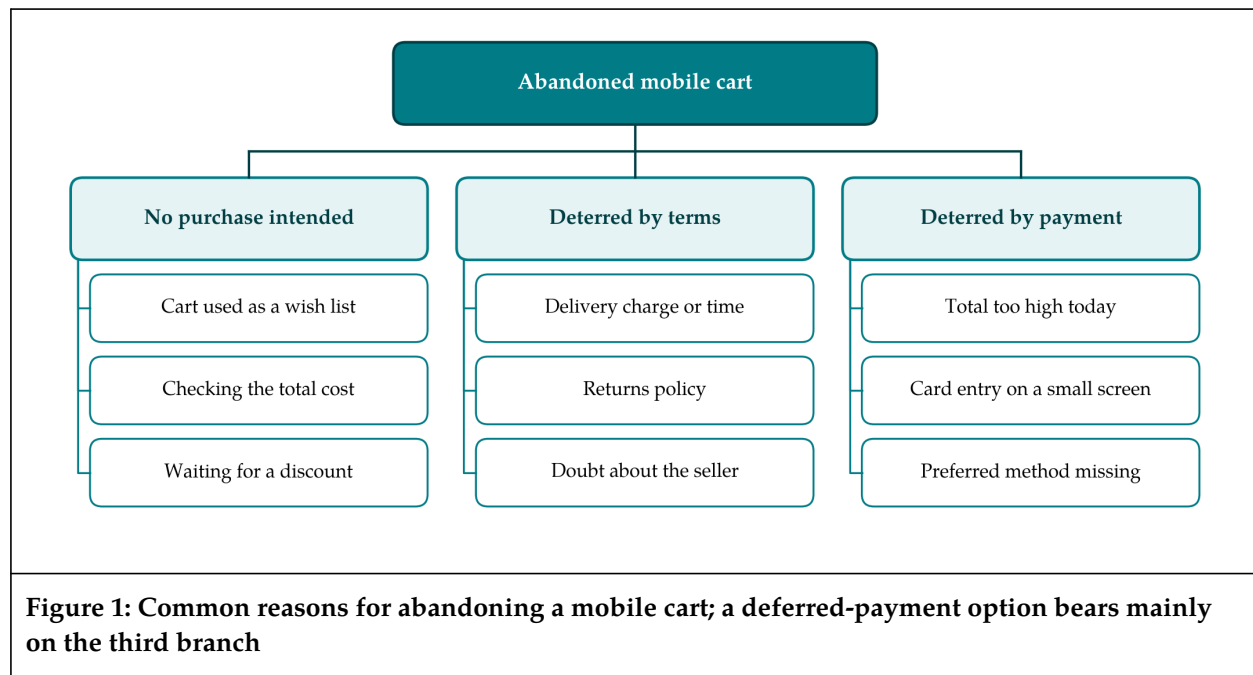
BNPL also adds exits of its own. The shopper may be redirected to the provider to register or log in, an eligibility check may decline the request, and a failure at either point ends a checkout that a card payment might have completed. Whether the option reduces abandonment on balance depends on the mix of reasons among a particular merchant's shoppers, which is exactly what the merchant does not know in advance.

4. Reading the Logs

Mobile storefront logs record a sequence of events for each session: product views, additions to cart, checkout started, payment method selected, payment submitted, order confirmed. Table 1 lists the signals relevant to BNPL and what each can support. The last column of the table is the important one.

Two comparisons tempt the analyst and both mislead. The first is before and after. A merchant who launches the option ahead of a sale season, alongside a redesign, or with a campaign by the provider will see completion change for reasons unrelated to the payment method. The second is between shoppers who choose BNPL and those who do not. A shopper selects a payment method only after deciding to proceed, so completion among those who selected any method is high by construction, and differences between methods reflect who chooses them. These are the standard problems of confounding and selection that make observational comparisons unreliable guides to causal effects ([Angrist and Pischke, 2009](#)).

The credible design is an experiment. Shoppers, or sessions, are assigned at random to see the BNPL messaging and button or not, and completion is compared across the whole of each arm from cart creation onward, including those who never reach payment ([Kohavi et al., 2020](#)). The unit of assignment should be the shopper where possible, since the product-page message may influence a purchase completed in a later session. Where an experiment is ruled out, a staggered launch across markets or product categories gives a weaker but usable comparison, provided the order of launch was not chosen on the basis of expected response.



5. Beyond Conversion

A higher completion rate is the merchant's measure of success, and it is an incomplete one. The United States Consumer Financial Protection Bureau has drawn attention to risks that include borrowers taking several loans at once across providers and becoming overextended, alongside uneven consumer protections (Consumer Financial Protection Bureau, 2022). In the United Kingdom a review for the Financial Conduct Authority recommended bringing interest-free BNPL within regulation (Woolard, 2021), and research on card transactions has documented BNPL instalments being paid with credit cards, which can turn an interest-free loan into interest-bearing debt (Guttman-Kenney et al., 2023). The psychological mechanisms that make the option effective at checkout are the same ones that make overspending easy.

Table 1: Storefront log signals relevant to a buy-now-pay-later integration and the limits of each

Log signal	What it shows	What it cannot show
Share of orders paid by BNPL	Uptake among buyers	Whether those orders would have been placed anyway
Completion rate before and after launch	Change over time	The effect of BNPL apart from season, promotions and app changes
Completion rate by method chosen	Difference between groups of shoppers	A causal effect, since shoppers select their own method
Drop-off at the provider redirect	Friction added by the BNPL flow	Why the shopper left
Declined eligibility checks	Sales lost to the provider screening	Whether a card payment would have succeeded
Returns and refunds by method	Reversal after purchase	Regret or difficulty with repayment

Merchants cannot observe a customer's finances, but their logs hold some relevant signals: return rates, repeat purchase, and complaints by payment method. Researchers with access to storefront data should report these with conversion. A sale that is completed, regretted and returned is a cost to both sides, and an integration judged only by abandonment will look better than it is.

6. Conclusion

Adding a deferred-payment option to a mobile storefront may well reduce cart abandonment, and behavioural theory explains why it should. Storefront logs alone, read through before-and-after or between-method comparisons, cannot show that it does or by how much. Randomised exposure, measured from the cart onward, can. Evidence on this question should be read with attention to its design and to what happens to buyers after the order is placed.

Conflict of interest

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References

- Angrist, J.D. and Pischke, J.-S. (2009). [Mostly Harmless Econometrics: An Empiricist's Companion](#). Princeton University Press, Princeton, NJ.
- Consumer Financial Protection Bureau (2022). [Buy Now, Pay Later: Market Trends and Consumer Impacts](#). Consumer Financial Protection Bureau, Washington, DC.
- Di Maggio, M., Williams, E. and Katz, J. (2022). [Buy now, pay later credit: User characteristics and effects on spending patterns](#). *NBER Working Paper*, No. 30508. <https://doi.org/10.3386/w30508>
- Gourville, J.T. (1998). [Pennies-a-day: The effect of temporal reframing on transaction evaluation](#). *Journal of Consumer Research*, 24(4): 395-408. <https://doi.org/10.1086/209517>
- Guttman-Kenney, B., Firth, C. and Gathergood, J. (2023). [Buy now, pay later \(BNPL\) ...on your credit card](#). *Journal of Behavioral and Experimental Finance*, 37: 100788. <https://doi.org/10.1016/j.jbef.2023.100788>
- Kohavi, R., Tang, D. and Xu, Y. (2020). [Trustworthy Online Controlled Experiments: A Practical Guide to A/B Testing](#). Cambridge University Press, Cambridge. <https://doi.org/10.1017/9781108653985>
- Kukar-Kinney, M. and Close, A.G. (2010). [The determinants of consumers' online shopping cart abandonment](#). *Journal of the Academy of Marketing Science*, 38(2): 240-250. <https://doi.org/10.1007/s11747-009-0141-5>
- Prelec, D. and Loewenstein, G. (1998). [The red and the black: Mental accounting of savings and debt](#). *Marketing Science*, 17(1): 4-28. <https://doi.org/10.1287/mksc.17.1.4>
- Prelec, D. and Simester, D. (2001). [Always leave home without it: A further investigation of the credit-card effect on willingness to pay](#). *Marketing Letters*, 12(1): 5-12. <https://doi.org/10.1023/A:1008196717017>
- Rajamma, R.K., Paswan, A.K. and Hossain, M.M. (2009). [Why do shoppers abandon shopping cart? Perceived waiting time, risk, and transaction inconvenience](#). *Journal of Product & Brand Management*, 18(3): 188-197.
- Soman, D. (2001). [Effects of payment mechanism on spending behavior: The role of rehearsal and immediacy of payments](#). *Journal of Consumer Research*, 27(4): 460-474. <https://doi.org/10.1086/319621>
- Woolard, C. (2021). [The Woolard Review: A review of change and innovation in the unsecured credit market](#). Financial Conduct Authority, London.

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